

WHAT IS CLAIMED IS:

1. A bearing member comprising:
a cylindrical member for rotatably supporting a shaft member, wherein the cylindrical member is composed of a copper metal; and
a film composed of cupric benzotriazole formed on a surface of the cylindrical member.

2. A bearing member according to claim 1, wherein the film composed of cupric benzotriazole is formed on all surfaces of the cylindrical member.

3. A bearing member according to claim 1, wherein the film composed of cupric benzotriazole is an anti-rust film that substantially prevents water and oxygen from entering the copper metal that forms the cylindrical member.

4. A bearing member according to claim 1, wherein the anti-rust film has a thickness of about 10^{-10} mm.

5. A bearing member according to claim 1, wherein the film composed of cupric benzotriazole is formed by reacting copper in the copper metal with benzotriazole.

6. A dynamic pressure bearing device comprising:
a bearing member including a shaft member, a cylindrical member that rotatably supports the shaft member, wherein the cylindrical member is made from a copper metal; and a film composed of cupric benzotriazole formed on a surface of the cylindrical body;

30k
20k
wherein the cylindrical member includes a dynamic pressure bearing sleeve that relatively rotatably supports the shaft member through dynamic pressure of a lubricating fluid.

7. A dynamic pressure bearing device according to claim 6, wherein the lubricating fluid includes benzotriazole, and the lubricating fluid is filled in a bearing gap space formed between the cylindrical member and the shaft member.

8. A dynamic pressure bearing device according to claim 7, wherein the lubricating fluid includes benzotriazole at a ratio of between 0.01 wt. % and 10 wt. %.

9. A dynamic pressure bearing device according to claim 7, further comprising a capillary sealing section provided at an opening area of the bearing gap space for holding the lubricating fluid within the bearing gap space by surface tension.

10. A dynamic pressure bearing device according to claim 9, wherein a new film composed of cupric benzotriazole is automatically formed at the capillary sealing section when the film composed of cupric benzotriazole is eliminated at the capillary sealing section.

11. A dynamic pressure bearing device according to claim 9, wherein the lubricating fluid including cupric benzotriazole forms a new film composed of cupric benzotriazole at the capillary sealing section when the film composed of cupric benzotriazole is eliminated at the capillary sealing section.

12. A method for manufacturing a bearing member including a cylindrical body for rotatably supporting a shaft member, the method comprising the steps of:

forming the cylindrical body with a copper metal;
reacting the cylindrical body with a solution including benzotriazole;
and
forming a film comprising cupric benzotriazole on a surface of the cylindrical body.

13. A manufacturing method according to claim 12, wherein the film comprising cupric benzotriazole is formed on all surfaces of the cylindrical body.

14. A manufacturing method according to claim 12, wherein a washing solution including benzotriazole is used to wash the cylindrical body, when washing the cylindrical body, in order to form the film comprising cupric benzotriazole.

15. A manufacturing method according to claim 12, wherein a machining solution including benzotriazole is used to machine the cylindrical body, when machining the cylindrical body, in order to form the film comprising cupric benzotriazole.

16. A manufacturing method according to claim 14, wherein the washing solution including benzotriazole is a water-soluble washing solution used in a degreasing washing process following a finishing process for the cylindrical body.

18. A manufacturing method according to claim 15, wherein the machining solution including benzotriazole is a water-soluble cutting solution that is usable in the cutting of the cylindrical body.

19. A manufacturing method according to claim 14, wherein the ratio of benzotriazole added to the washing solution is between 0.01 wt. % and 10 wt. %.

20. A manufacturing method according to claim 15, wherein the ratio of benzotriazole added to the machining solution is between 0.01 wt. % and 10 wt. %.

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